

153. The apparatus of claim 152 wherein the dispensing units are adjusted to dispense droplets no greater than 5 nl.

154. The apparatus of claim 152 wherein the compound is dissolved in the solution.

155. The apparatus of claim 152 wherein the dispenser and the support contact each other.

156. The apparatus of claim 152 wherein the droplet fits within a region on the support having a diameter of less than 300 microns.

157. The apparatus of claim 152 wherein the compound comprises a monomer or polymer.

158. The apparatus of claim 157 wherein the monomer comprises a nucleotide or an amino acid.

159. The apparatus of claim 157 wherein the polymer comprises a nucleic acid, oligonucleotide, polynucleotide, peptide, polypeptide, presynthesized polymer, polyurethane, polyester, polycarbonate, polyurea, polyamide, polyethyleneimine, polyacetate, receptor, enzyme, antibody, catalytic polypeptide, hormone receptor, or opiate receptor.

160. The apparatus of claim 157 wherein the polymer comprises at least 2 monomers.

161. The apparatus of claim 157 wherein the polymer comprises greater than 100 monomers.

162. The apparatus of claim 157 wherein the polymer comprises 2, 3, 4, 5, 6, 10, 15, 20, 30, 40, 50, 75, or 100 monomers.

163. The apparatus of claim 152 wherein the support is selected from the group consisting of substantially flat substrates, substrates having raised or depressed regions, beads,

gels, sheets, particles, strands, precipitates, spheres, containers, capillaries, pads, slices, films, plates, and slides.

164. The apparatus of claim 152 wherein the support comprises a gel.

165. The apparatus of claim 152 wherein the support comprises biological materials, nonbiological materials, organic materials or inorganic materials.

166. The apparatus of claim 152 wherein the support is a disc, square, or circle.

167. The apparatus of claim 152 wherein the localized area is smaller than 1mm^2 .

168. The apparatus of claim 152 wherein the localized area is smaller than 0.5mm^2 .

169. The apparatus of claim 152 wherein the localized area is smaller than $10,000\text{ }\mu\text{m}^2$.

170. The apparatus of claim 152 wherein the localized area is smaller than $100\text{ }\mu\text{m}^2$.

171. The apparatus of claim 152 wherein the array of substances includes at least 100 different polymers at different localized areas.

172. The apparatus of claim 152 wherein the array of substances includes at least 1000 different polymers at different localized areas.

173. The apparatus of claim 153 wherein the array of substances includes at least 10,000 different polymers at different localized areas.

174. The apparatus of claim 154 wherein the array of substances includes at least 100,000 different polymers at different localized areas.

175. The apparatus of claim 155 wherein the array of substances includes at least 1,000,000 different polymers at different localized areas.

176. The apparatus of claim 152, wherein the array of substances includes at least 1000 different polymers occupying localized areas within 1 cm^2 of the surface of the support.

177. The apparatus of claim 152, wherein the support comprises glass, derivatized glass, pyrex, quartz, a polymeric material, polystyrene, polycarbonate, silicon or a gel.

178. The apparatus of claim 152, wherein the solution comprises an aqueous solution.

179. The apparatus of claim 152, wherein the support bears at least two reference points for positioning the dispenser over at least one of said localized areas for release of said droplet.

180. The apparatus of claim 179, wherein the reference points comprise global reference points for positioning the dispenser over a local region of the surface of the support, and local reference points within the local region for positioning the dispenser over a localized area within the local region.

181. The apparatus of claim 179, wherein the dispenser further comprises a camera for identifying the reference points.

182. The apparatus of claim 179 further comprising a device for sensing changes in capacitance to identify the reference points.

183. The apparatus of claim 179 further comprising a device for sensing changes in light intensity to identify the reference points.

184. The apparatus of claim 179 further comprising a device for sensing changes in resistivity to identify the reference points.

185. The apparatus of claim 179 further comprising a device for sensing changes in optical properties to identify the reference points.

186. The apparatus of claim 179 further comprising a device for sensing changes in magnetic properties to identify the reference points.

187. The apparatus of claim 152 wherein the array of dispensing units comprises a manifold of delivery lines.

188. The apparatus of claim 152 wherein the array of dispensing units comprises an array of pipettes.

189. The apparatus of claim 152 wherein the array of dispensing units comprises a series of tubes.

190. The apparatus of claim 152 wherein the dispenser is moveable relative to the support.

191. The apparatus of claim 152 wherein the support is moveable relative to the dispenser.

192. The apparatus of claim 152 wherein the one or more localized areas are spaced less than 3 mm apart.

193. The apparatus of claim 152 wherein the one or more localized areas are spaced less than between 5 microns and 100 microns apart.

194. The apparatus of claim 152 wherein the one or more localized areas has an angular relation between each localized area of about 1 degree.

195. The apparatus of claim 152 wherein the one or more localized areas has an angular relation between each localized area of about 0.1 degree.

196. The apparatus of claim 152 wherein the support comprises at least 100 localized areas.

197. The apparatus of claim 152 wherein the support comprises at least 1000 localized areas.

198. The apparatus of claim 152 wherein the support comprises at least 10,000 localized areas.

199. The apparatus of claim 152 wherein the support comprises at least 1000 localized areas per cm² of surface of substrate.

200. The apparatus of claim 152 wherein the support comprises at least 10,000 localized areas per cm² of surface of substrate.

201. The apparatus of claim 152 wherein the support comprises a strand including one or more of glass, derivatized glass, quartz, or a polymeric material.

202. The apparatus of claim 152 wherein the surface of the support comprises a hydrophilic or hydrophobic substance.

203. The apparatus of claim 152 wherein the surface of the support comprises a photoresist.

204. The apparatus of claim 152 wherein the surface of the support is pretreated.

205. The apparatus of claim 152, wherein the array of substances includes at least 10,000 different polymers occupying localized areas within 1 cm² of the surface of the support.

206. The apparatus of claim 152 including a laser for locating a reference point.

REMARKS

Prior to examination on the merits, applicants respectfully request entry of the foregoing newly added claims and consideration of the following remarks.

I. Status of the Application

Claims 48-151 are presently pending in the application. Applicants have added